Unmasking connections: Social network analysis of a statewide social care network during the COVID-19 pandemic

Background: Community-based organizations (CBOs), healthcare providers and government agencies experienced unprecedented social service demand during the COVID-19 pandemic. One statewide social care network leveraging referral platform technology experienced a 139% increase in referral volume from March to September 2020, reflecting the importance of real-time social care data to rapidly scale networks that meet families' needs.

Objective: We conducted a social network analysis (SNA) to 1) understand growth and interconnectedness within one statewide social care network during the pandemic and 2) examine how targeted community engagement impacts network structure to support evolving community needs.

Methods: Statewide network growth was measured by the number of participating network partners over time, while connectedness was measured by the number of referrals between partners.

Results: In March 2020, a small number of organizations were participating in the statewide network (n=107) and of those, several small groups or clusters of organizations had no connections to the central network. By January 2021, the network showed sizable growth both in the number of participating organizations (n=632) and the connections between them (n=1,746). At this time, almost all organizations were connected to at least one referral partner. By September 2022, a fully mature network was observed with broad cross-sector representation (1,449 organizations offering more than 100 service types), 99.9% connection among partners, and 6,316 unique links between organizations throughout the network. Additionally, while referral volume increased by 139% during peak pandemic months, the number of partners available to meet the need increased by 67%.

Conclusion: In a time of unprecedented social needs, we witnessed sustained network growth and increased connectivity, with the right partners onboarded to meet the need. Real-time social care data can be an invaluable resource for informing targeted investments to address community-level service gaps.